



64. A system for generating an image of a relief object comprising:
an electroluminescent device including a light emitting layer coupled to an electrode;
a dielectric layer disposed adjacent the light emitting layer;
a variable resistive layer adjacent the dielectric layer of said electroluminescent device, said variable resistive layer being comprised of conductive particles dispersed through a non-conductive medium;

a flexible electrode substantially covering a surface of said variable resistive layer;
an electrical current source, said electrical current source having one lead coupled to said electrode of said electroluminescent device and a second lead for coupling to said flexible electrode so that current coupled from said current source to said flexible electrode is strongly coupled through a low resistance path through said variable resistance layer to said electroluminescent device by ridges of said relief object and weakly coupled through a high resistance path through said variable resistance layer to said electroluminescent device by valleys of said relief object whereby more intense light is generated by areas of said electroluminescent device strongly coupled to said current from said ridges of said relief object and less intense light is generated by areas of said electroluminescent device weakly coupled to said current from valleys of said relief object to form an image of the relief object.

79. A device for generating an image of a relief object comprising:
a flexible electrode;
a dielectric layer and a light emitting layer in which light emitting particles are dispersed;

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a variable resistive layer between said flexible electrode and said dielectric layer, said variable resistive layer being comprised of conductive particles dispersed through a non-conductive medium;

a second electrode; and

an electrical current source, having first and second leads, said first lead of said electrical current source being coupled to said second electrode and said second lead of said electrical current source being coupled to said flexible electrode so that a localized pressure gradient generated by a portion of a relief object contacting said flexible electrode forms a conductive path through said variable resistive layer which corresponds to said localized pressure gradient whereby said current flows from said flexible electrode through said variable resistive layer, dielectric layer and light emitting particles to said second electrode in correspondence with said localized pressure gradient to generate a light image of said relief object.

80. A system for generating an image of a relief object comprising:

an electroluminescent device having an electrode and configured as an organic electroluminescent device;

a variable resistive layer being proximate to one surface of said electroluminescent device, said variable resistive layer being comprised of conductive particles dispersed through a non-conductive medium;

a flexible electrode that substantially covers a surface of said variable resistive layer; and

said electrical current source being a direct current source having one lead coupled to said electrode of said organic device and a second lead exposed at a surface of said flexible electrode so that a localized pressure gradient generated by a portion of a relief object contacting said flexible electrode forms a conductive path through said variable resistive layer which corresponds to said

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localized pressure gradient whereby said current flows from said direct current source and flexible electrode through said variable resistive layer to said electrode of said organic electroluminescent device in correspondence with said localized pressure gradient to generate a light image of said relief object.

81. A method for imaging a relief object comprising the steps of:

coupling an electrode of an electroluminescent device to a current source;

locating a variable resistive layer adjacent a dielectric layer of said

electroluminescent device, said variable resistive layer being comprised of conductive particles dispersed through a non-conductive medium;

substantially covering said variable resistive layer with a flexible electrode;

coupling said current source to said flexible electrode so that said contacting step contacts a relief object contacts said flexible electrode so that pressure from ridges and valleys of said relief object generate relatively low and high resistance conductive paths through said variable resistive layer whereby said current from said current source is provided through said variable resistive layer at different magnitudes in correspondence to said ridges and valleys of said relief object and said different currents cause said electroluminescent device to generate said image of said relief object;

82. A system for generating an image of a relief object comprising:

an electroluminescent device having a transparent electrode layer and a dielectric layer receiving dispersed light emitting particles and substantially covering said transparent electrode layer; and

an electrical current source, said electrical current source having one lead coupled to said electrode of said electroluminescent device and a second lead for coupling to a relief object in proximity to said electroluminescent device and contacting the dielectric layer so that current coupled

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from said current source to said relief object is strongly coupled to said electroluminescent device by ridges of said relief object and weakly coupled to said electroluminescent device by valleys of said relief object whereby more intense light is generated by areas of said electroluminescent device strongly coupled to said current from said ridges of said relief object and less intense light is generated by areas of said electroluminescent device weakly coupled to said current from valleys of said relief object to form an image of the relief object;

90. A system for generating an image of a relief object comprising:

an organic electroluminescent device having a transparent electrode as an anode, said transparent anode having a thin, sublimed molecular film deposited thereon, the electroluminescent device including a light emitting layer and a dielectric layer; and

an electrical current source, said electrical current source having one lead coupled to said transparent anode of said electroluminescent device and a second lead for coupling to a relief object in proximity to said electroluminescent device and contacting the dielectric layer so that current coupled from said current source to said relief object is strongly coupled to said electroluminescent device by ridges of said relief object and weakly coupled to said electroluminescent device by valleys of said relief object whereby more intense light is generated by areas of said electroluminescent device strongly coupled to said current from said ridges of said relief object and less intense light is generated by areas of said electroluminescent device weakly coupled to said current from valleys of said relief object to form an image of the relief object.

95. A system for generating an image of a relief object comprising:

an electroluminescent device having an electrode, a light emitting layer and a dielectric layer;

an electrical current source, said electrical current source having one lead coupled to said electrode of said electroluminescent device and a second lead for coupling to a relief object in

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proximity to said electroluminescent device and contacting the dielectric layer so that current coupled from said current source to said relief object is strongly coupled to said electroluminescent device by ridges of said relief object and weakly coupled to said electroluminescent device by valleys of said relief object whereby more intense light is generated by areas of said electroluminescent device strongly coupled to said current from said ridges of said relief object and less intense light is generated by areas of said electroluminescent device weakly coupled to said current from valleys of said relief object to form an image of the relief object; and

a one-to-one sensor array located such that said generated light is sensed by said one-to-one sensor array.